

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number
WO 2005/033675 A1

(51) International Patent Classification⁷: **G01N 15/06**,
1/22, 21/53, 21/85

(21) International Application Number:
PCT/GB2004/004141

(22) International Filing Date:
28 September 2004 (28.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0323055.4 2 October 2003 (02.10.2003) GB

(71) Applicant (for all designated States except US):
UNIDATA EUROPE LIMITED [GB/GB]; Unit 2,
Turner Business Park, Richmond Park Road, Sheffield S13
8HT (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WILLIAMS**,
Leonard, Fredrick, George [GB/GB]; Pebble Rise, Leys

Lane, Preston Bisset, Buckingham MK18 4LJ (GB).
BANN, John, Richard [GB/GB]; 9 Trenchard Drive,
Buxton, Derbyshire SK17 9JY (GB). **HARRIS, Nigel, Ed-**
ward [GB/GB]; 5 Leefield Road, Chapel-en-le-Frith, High
Peak, Derbyshire SK23 0LF (GB). **SIDDONS, Jeremy,**
Francis [GB/GB]; 38 Brookside Road, Chapel-en-le-Frith,
High Peak, Derbyshire SK23 ONE (GB).

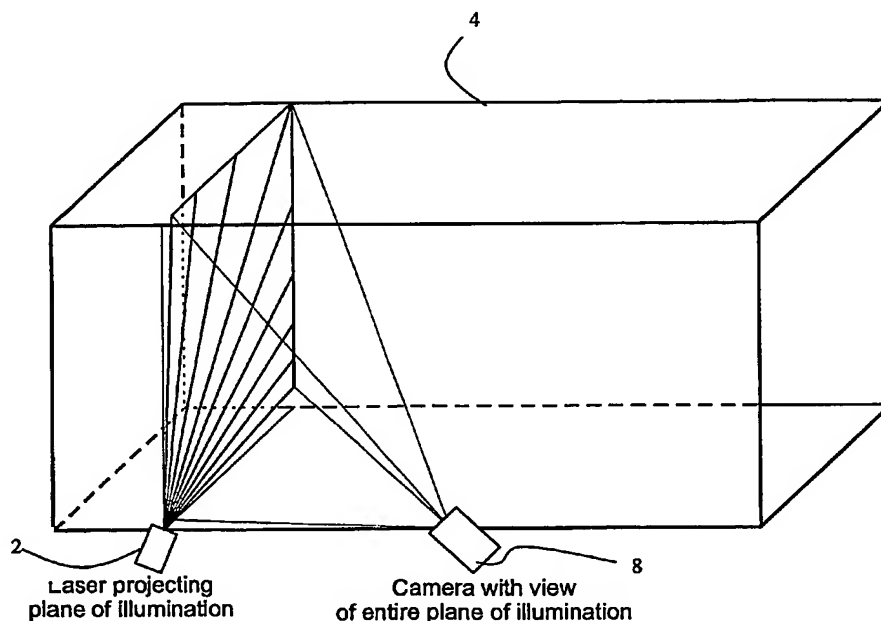
(74) Agents: **NEILL, Alastair, William** et al.; Appleyard Lees,
15 Clare Road, Halifax HX1 2HY (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: PARTICULATE DETECTOR



(57) Abstract: An apparatus and method are provided for detecting presence in gas of transient particulate above its normal zero or acceptable level within a duct (4), said apparatus comprising at least one emitter (2) of illumination selected from infra-red, ultraviolet and visible radiation capable of being projected over essentially the entire cross section of the duct (4) and at least one detector (8, 18, 25) for detecting any sparkle of the illumination from the particulate. The apparatus and method are in particular useful for detecting monitoring particulate in areas where build up or presence of particulate can be disadvantageous, for example hospitals and electricity generating stations.



WO 2005/033675 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.